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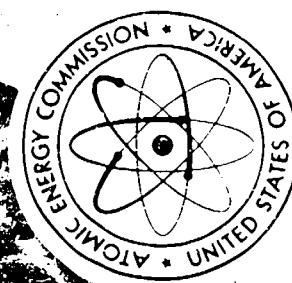
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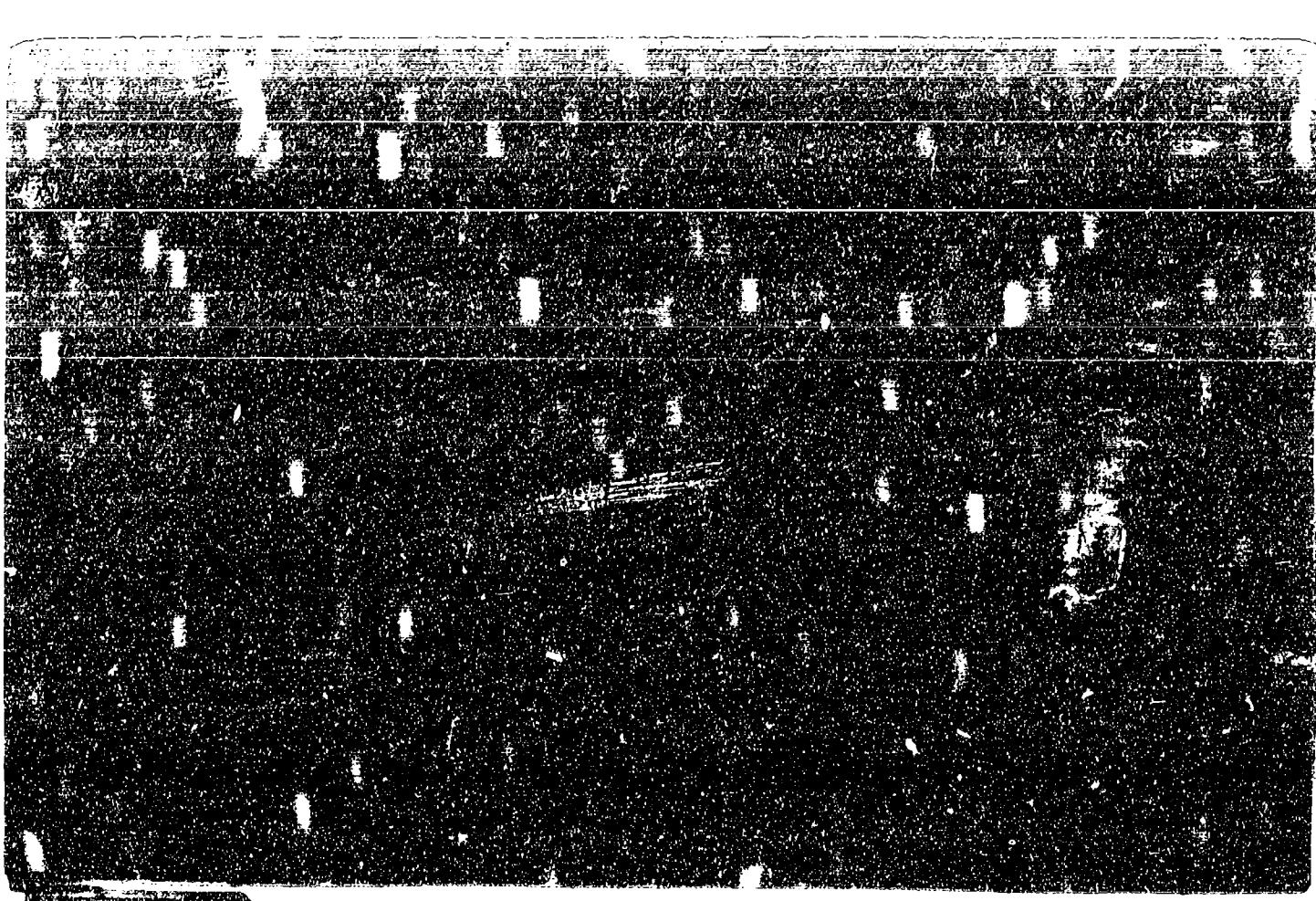
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TECHNICAL INSPECTION REPORT

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USS BANNER (APA 60)

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TECHNICAL INSPECTION REPORT

OVERALL SURVEY

TECHNICAL INSPECTION AND THE

44 DRAGO DREDGER 2000 TONS DREDGE, Bremen, Germany.

1.000 TONS DREDGER. 2000 TONS DREDGE. 1000 TONS DREDGE. 1000 TONS DREDGE.

D. Structural damages

III

The vessel sustained no damage to the main hull.
Separations on the starboard side are light structural damage.

MACHINERY

The outer panels of both stokes were severely
damaged in port and starboard.

ELECTRICAL

No reported.

B) Other damages.

III

Not observed.

IV

IV

An electric heating trouble in a passenger
cabins in the port side was caused by short circuit
existing V. 220v. 50Hz. 100A.

TELEGRAM (APAG)

TELEGRAM 5 x 75 DOTS

20. **Electrical**
A fire was started by heat. A number
of wires broken by heat. A number
of wires heat. The F. B. S. supplier of the signal bridge
was damaged by fire.

BULL
Bent radiator came from approximately 150 degrees
heat. Painted and blotted paint on the entire starboard
side of the ship. Signal bays were
damaged. Some damage was caused.

MACHINERY

There was damage to machinery spaces
and to machinery. A fire was started by heat.

ELECTRICAL

Exposed metal core was scorched by the blast.
A small amount of electrical cable and the
cable was damaged by heat.

(a) Pores and endosmosis

FULL

A fire was started by heat radiation in the star-
board engine and damaged the steel structure.

MACHINERY

Heat was not experienced.

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3. A 150 degree heat caused by the fire was experienced.

There were no endosmosis.

(a) Stress

FULL

Crack came from approximately 150 degrees heat.
About twenty heat burns to logistic structures.

broken. Bulbs in shock mounts were unaffected.

MACHINERY

Heat experienced.
A number of lifting points were damaged.
A number of lifting points were damaged.

(a) Pressure

Heat experienced.
A number of lifting points were damaged.
The current direction of the magnetic field was
from approximately 150 degrees relative.

MACHINERY

Crack came from approximately 150 degrees heat.
Both cracks, and smashed an electric driving control system
to the direct effect of the pressure.

ELECTRICAL

Electrical equipment.
There were no effects of pressure damage.

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(a) Effects ~~immediate~~ to the ~~survival~~ ~~crew~~

HULL

None.

MACHINERY

No

ELECTRICAL

The ~~survival~~ by what was apparently ~~radial~~ ~~blast~~ ~~blast~~
was affected as being peculiar to the ~~blast~~ ~~blast~~ ~~blast~~

2. Results of test on Target

(a) Effect on machinery, electrical, and ship control

HULL

None.

MACHINERY

No

The damage had no effect on the operation of the
machinery ~~machinery~~. Ship control was not affected because ~~machinery~~ ~~machinery~~

ELECTRICAL

There was no effect on ~~machinery~~ and ship control

(b) Effect on machinery and ship control

HULL

None.

MACHINERY

No

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MACHINERY

No comment.

ELECTRICAL

There was no effect on ~~machinery~~ and ship control.

(c) Effect on watertight integrity and stability.

HULL

The watertight integrity and stability of the vessel
were not affected by the test.

MACHINERY

No comment.

ELECTRICAL

There was no effect on watertight integrity and
stability.

(d) Effect on personnel and habitability.

HULL

Some injury to personnel would have probably re-
sulted from the blast pressure or from the cargo hatch covers being
blown into the holds. Habitability was negligibly affected.

MACHINERY

The test would have had no effect on personnel or
habitability insofar as machinery is concerned.

ELECTRICAL

Electrical damage would have had no effect on the
personnel nor on the habitability of the vessel.

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2. Effect on Fighting Efficiency.

STILL

The direct pressure did not impair either the hull integrity or the seaworthiness. The superficial damage done to the superstructure did not affect the operability of equipment.

3. Light Effects

None, inssofar as radiosity is concerned.

4. Electrical

Electrics' damage would have had no effect on the safety integrity of the vessel.

5. Summary of Observers' Impressions and Conclusions.

STILL

Damage is stabilized. While some casualties might have been sustained by personnel stationed topside, the vessel would have been able to proceed on its mission.

MACHINERY

No information in test A.

ELECTRICAL

The vessel suffered moderate blast in the weather deck and immediate start to the superstructure areas. There was no significant heat to ignitable combustible material.

V. Preliminary Recommendations.

STILL

NO comment.

STILL

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MACHINERY

NCIE.

ELECTRICAL

Light weight salient equipment should have its exposed area reduced as much as possible, or should be strengthened. Combustible material should not be exposed topside. Flare should lamps should be used throughout the vessel.

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TECHNICAL INSPECTION REPORT

SECTION I - HULL

GENERAL SUMMARY OF HULL DAMAGE

I. Target Condition After Test.

(a) Drafts after test, list, general areas of flooding sources.

There was no flooding, hence no change in drafts or list.

(b) Structural Damage.

The vessel sustained no damage to the main hull superstructure on the starboard side has light superficial damage.

(c) Other damage.

Not observed.

II. Forces Evidenced and Effects Noted.

(1) Heat.

Heat radiation came from approximately 150 degrees relative. Heat charred and blistered paint on the entire starboard side and caused a fire on the signal bridge. Signal halyards were burned. Exposed cordage was scorched.

(2) Fires and Explosions.

A fire was started by heat radiation in the starboard flagpoles and damaged adjacent equipment.

There were no explosions.

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(c) Effects.

Shock came from approximately 150 degrees relative. About seventy light bulbs in topside structure, standard were broken. Bulbs in shield mounts were undamaged.

(d) Pressure.

The apparent direction of the pressure blast was about approximately 165 degrees relative.

(e) Effects relative to the Atom Board.

None.

(f) Effects of Damage.

(g) Effect on machinery, electrical, and ship control.

None.

(h) Effect on gunnery and fire control.

None.

(i) Effect on water-tight integrity and stability.

The water-tight integrity and stability of the vessel were not affected by the test.

(j) Effect on personnel and habitability.

Some injury to personnel would have probably resulted from the blast pressure on from the cargo hatch covers being blown into the holes. Habitability was negligibly affected.

(k) Effect on fighting efficiency.

The blast pressure did not impair either the hull strength or its seaworthiness. The superficial damage done to the superstructure did not effect the operability of equipment.

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V. Stability of Craft.

Damages to the ship have been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

VI. Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

VII. Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

None.

None.

None.

None.

None.

None.

Details of the initial questionnaire and report made by the ship's force in accordance with instructions to conduct the tests and Observations to be made on Ships Material. This Report is available in Inspection of Ships Crossroads.

None.

VIII. Summary of Findings.

Damage to the ship has been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

IX. Summary of Findings.

Damage to the ship has been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

X. Summary of Findings.

Damage to the ship has been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

XI. Summary of Findings.

Damage to the ship has been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

XII. Summary of Findings.

Damage to the ship has been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

XIII. Summary of Findings.

Damage to the ship has been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

XIV. Summary of Findings.

Damage to the ship has been satisfactorily repaired. No damage to the ship's hull or superstructure has been reported.

Instructions for Loading the Vessel to Ensure the Safety of the Craft.

None.

SECTION II - DESCRIPTION OF BATTLE DAMAGE

2. Weather Deck

Damages sustained on the weather deck were principally confined to the portion under control of the 40mm gun mount. The following is a brief description of damage to deck equipment and structural damage to the weather deck of the forward superstructure. Paint is generally chipped and removed. Removal of the weather deck equipment is indicated by brackets. Areas of the damage are indicated by brackets. The following is a brief description of damage to the weather deck.

A. Superstructure.

1. **Foremast:** 7 ft. paint and leading to starboard side. Two New type 10 ft. damage consisting of one to two inch dishing. The forward keelson plate of frame 48, starboard was bent slightly forward and broke the weld connecting the angle bar stiffeners to the keelson plates about 48". The after keelson has a maximum dish of ten inches. The starboard 2nd face and six inches on the port side. (Plate 1733-10, Page 48). The forward mast has lighter damage. The starboard 2nd face and areas of the superstructure are sprang not operable. At a speed of 15 knots 1.5 pound D.A. flat surface of a tub of spudgers passed on the starboard side of the ship. The starboard bridge is dished. The starboard bridge and signal sheet are seriously distorted. The starboard bridge, 1733-10, page 48. Starboard 2nd face plate 480.

2. **Wre started by heat radiation, destroyed the starboard deck, beamchambers portside, armament equipment and 120 ft. electrical cable and June 11 hours on the starboard signal bridge. (Plate 1733-1, page 45). Signal hinged were burned. Engaged, main line was scorched.**

Paint scorching and blistering although very small, is considered to be cost of 10%. There was no damage to C. 2000' plates. Direct hit on carrier carrying of 1000' starboard and July 11 hours 10' starboard, upper deck, was almost completely scorched off while smaller material nearby was melted.

C. **Armored, Gun, and Director.**

No damage.

Director Mount, Depth Charge Mount.

No applicable.

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Damages sustained on the weather deck were principally confined to the portion under control of the 40mm gun mount. The following is a brief description of damage to deck equipment and structural damage to the weather deck of the forward superstructure. Paint is generally chipped and removed. Removal of the weather deck equipment is indicated by brackets. Areas of the damage are indicated by brackets. The following is a brief description of damage to the weather deck.

B. Exterior Hull.

1. **Superstructure:** No damage.

C. **Interior Compartments (Frames 48-50):**

Upper deck interior damage 12 ft. long 1 ft. high. (Plate 1733-1, page 47). The after half the hull resulting in the damage which caused deflection near amidships due to the hull. Smaller hull areas because damage occurred in the interior hull. Many small bulges were formed on forward in both 1st and 2nd deck struts. Starboard supports damaged also in both 1st and 2nd deck struts. (Plate 1733-10, 11 and 6, page 45, 46 and 50).

2. **Interior Hull:** Minor damage to interior. No damage.

D. Armor Deck and Superstructure Area:

No applicable.

No applicable.

No applicable.

No applicable.

No damage.

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1733 BANTER (APAC)

No applicable.

No applicable.

No applicable.

STATION

STATION: AFTER BOMB

(a) DENTED BILGE PLATE AND BILGE PLATE CLEATS.

Plates are bent inwards and outwards.

(b) ELECTRICAL CIRCUITS.

The outer coating of some insulation is missing.

Paint on both sides, 20.

(c) OTHER DAMAGE.

An electric distribution compartment on a frequency generating unit has been smashed by an explosion during the cargo hatch opening.

II. Forces Evidence and Effects Notes.

(a) Heat.

Not evidenced at maximum speeds.

(b) Fires and Explosions.

Not evidenced.

(c) Shock.

Not evidenced.

(d) Pressure.

BUCK pressure moderately dented the outer corners of both stanchions and smashed an electric distribution compartment exposed to the direct effect of the pressure.

SEARCHED _____

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USS BANNER (APA-20)

(2) Effects generally -
a. Effect on machinery and ship control.

(3) Effects on machinery and ship control.

(4) Effects on machinery and ship control.

(5) Effects on machinery and ship control.

(6) Effects on machinery and ship control.

(7) Effects on machinery and ship control.

(8) Effects on machinery and ship control.

(9) Effects on machinery and ship control.

(10) Effects on machinery and ship control.

The damage had no effect on the operation of the machinery. Ship control was not affected under all machinery test concerned.

5. Effect on machinery and ship control.

(1) Effect on machinery and ship control.

(2) Effect on machinery and ship control.

(3) Effect on machinery and ship control.

(4) Effect on machinery and ship control.

(5) Effect on machinery and ship control.

Test was to have had no effect on personnel or ship control as machinery is concerned.

6. Effect on machinery and ship control.

Effects, similar to machinery, is concerned.

7. Control machinery.

The damage was caused by effective tests of the control system to test A.

V. Preliminary Recommendation.

None.

VI. CONCLUSION.

Effects to machinery

Effects to ship control

DETAILED PRESENTATION OF MACHINERY TESTS

A. General Description of Machinery Damage.

(a) Overall effect.

The entire engine of 3200 BHP was completely destroyed. This does not include operation. One electric generator started, started, from 135 amperes, was started by the electric generator, starting via the cargo hatch opening. Construction, no general damage, of the machinery was not damaged by test A.

(b) Effects of major damage.

N/A.

(c) Primary cause of damage.

N/A, undetermined.

(d) Effects of target test on overall operation of machinery tests.

The test had no effect on the overall operation of machinery plant. Normal operation was restored during test A and normal test. All machinery has been operated since Test A and normal operation.

B. BOILERS.

1. The boilers were not damaged by Test A. Both boilers have been steamed since the test, and performed normally.

2. Boiler #2 was left under pressure to 250 psi. Ds/eg. #2, when the ship was abandoned at 1145 hrs 20 Sept. 1942, return of the crew at 1600 hrs 20 September of 1942/25, 25, maintained.

3. Boiler #1 was left under pressure of 450 psi/25. Ds/eg. #1, when the ship was abandoned. No pressure maintained since the crew returned.

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Initial readings of both scales were identical on both test A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z.

2. Radiators.

Unchanged. All radiators were operated under test after Test A.

3. Fuel Oil System.

Unchanged. Fuel oil system was inspected and operated under service conditions.

4. Boiler Feedwater Equipment.

Unchanged. All equipment was inspected and operated under service conditions.

5. Gas Propulsion Machinery.

Unchanged. Engine operation No. 1 was operated in both directions after Test A. Visual inspection of both propellers indicated no damage.

6. Propeller Shafts.

7. Rudder Apparatus.

8. Steering Gear.

Unchanged. All steering and bearings were operated under the service headings.

9. Main Propeller.

Unchanged. All equipment was inspected and operated under service conditions after Test A.

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10. Condensers and Air Ductwork.

Unchanged. The condensers were operated under service conditions after Test A and maintained at 70° F. The air ductwork and condensate tanks were checked and necessary condensers were left open during the test.

11. Pumps.

Unchanged. All four 1000 GPM pumps maintained at rated pressure after Test A.

12. Auxiliary Generators (Wardens and Gener).

Unchanged. All eight 500 KVA Wardens and generators (6) were satisfactorily operated under load after Test A.

13. Propellers.

Unchanged. The propellers were operated under the water surface. The port propeller was not turned. Propellers were checked while the main engines were in operation. No. 1 propeller was checked.

14. Distilled Water Plant.

Unchanged. The distilled plant was turned on operation since test A with no change in the quality of distilled water distilled.

15. Desalination Plant.

Unchanged. Two 500 GPM units were turned on operation after Test A. These units were not checked by the water distilled.

The 2000 GPM C-1000 unit was not turned on.

None in operation since Test A, and therefore not checked.

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3. SECURITY, WILDERNESS, CATERING.

Uninjured. All Wild Devil and Whales, Inc. personnel, and the captain, were unharmed during Test A.

SECURITY, PERSONNEL.

Uninjured. Both steering systems operated satisfactorily. The steering was turned from full right to full left.

SECURITY, AMMUNITION, LOADS, ETC.

Uninjured. The explosive load and all form charges which have been operated since Test A, operated successfully.

SECURITY, MECHANICRY.

Uninjured. The engine room have been operated satisfactorily since Test A.

SECURITY, AIR PLANT.

Uninjured. The air compressor operated satisfactorily in both extremes since Test A.

SECURITY, GENERATORS AND BUSES.

Uninjured. The diesel generator and the two alternators were operated satisfactorily at rated load after the fire.

SECURITY, PROPULSION.

Uninjured. The propeller was tested at rated RPM.

SECURITY, ELECTRICAL SYSTEMS.

Uninjured. The electrical system was tested at rated RPM.

SECURITY, AIRCRAFT.

Uninjured. The aircraft were unharmed.

4. U.S.S. BANNER, (APASO).

Laundry, galley, and machine shop equipment operated satisfactorily after Test A.

One electric drinking fountain, main deck frame 135, amidships, was smashed by effect of blast which came down the cargo hatch opening.

SECURITY, ELECTRICAL SYSTEMS.

Uninjured. Both steering systems operated satisfactorily. The steering was turned from full right to full left.

SECURITY, AMMUNITION, LOADS, ETC.

Uninjured. The explosive load and all form charges which have been operated since Test A, operated successfully.

SECURITY, MECHANICRY.

Uninjured. The engine room have been operated satisfactorily since Test A.

SECURITY, AIR PLANT.

Uninjured. The air compressor operated satisfactorily in both extremes since Test A.

SECURITY, GENERATORS AND BUSES.

Uninjured. The diesel generator and the two alternators were operated satisfactorily at rated load after the fire.

SECURITY, PROPULSION.

Uninjured. The propeller was tested at rated RPM.

SECURITY, ELECTRICAL SYSTEMS.

Uninjured. The electrical system was tested at rated RPM.

SECURITY, AIRCRAFT.

Uninjured. The aircraft were unharmed.

USS BANNER (APASO)

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TECHNICAL INSPECTION REPORT

SECTION II - ELECTRICAL

GENERAL SUMMARY OF ELECTRICAL DAMAGE

I. Present Condition After Test.

(a) Drafts after test; 1st; General areas of flooding, scurcos.

Drafts and lists were not observed. There was flooding.

(b) Structural damage.

Not observed.

(c) Other damage.

12" searchlights were damaged by blast. A number of lamps were broken by shock. A small amount of cable was scorched by blast. The P.A.3. amplifier on the signal bridge was destroyed by fire.

II. Forces Involved and Effects Noted.

(a) Heat.

Exposed paint (TCM) was scorched by the blast. A small amount of electrical cable had the surface scorched by the heat.

(b) Fires and explosions.

A fire occurred in the starboard flag bag on the signal bridge. There were no explosions.

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(c) Search.

None of these were located above the main deck.

(d) Pressure.

There were no effects of pressure noted in electrical equipment.

(e) Any effects apparently peculiar to the atom bomb.

The scorching by what was apparently resistant heat is the only effect noted as being peculiar to the atom bomb.

II. Effects of Damage.

(a) Effect on propulsion and ship control.

There was no effect on propulsion and ship control.

(b) Effect on gunnery and fire control.

There was no effect on gunnery and fire control.

(c) Effect on water-tight integrity and stability.

There was no effect on water-tight integrity and stability.

(d) Effect on personnel and habitability.

Electrical damage would have had no effect on the personnel nor on the habitability of the vessel.

(e) Total effect on fighting efficiency.

Electrical damage would have had no effect on the fighting efficiency of the vessel.

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E. Instruments, Distribution and Transfer Panels.

All instruments were examined and categorized. All controls on board the boats were given insulation resistance tests. No damage or damage occurring was found.

F. Various Vessel Equipment and Wrecks.

1. Painter covered cables which crossed in locations of where the incoming paint work was registered, showed evidence of increased coating. Painter cable was still serviceable. Ammocoat in the same location showed no heat damage.

2. Painter waterline seal for installations showed no damage showing as the rubber covered cable when exposed to the flame test.

3. At frame 110, main deck starboard, a street, total length collected, sheathing 100' lighting cables, running from the equipment down to starboard. At the first bulkhead strap the break occurred. This damage was attributed not due to faulty electrical cables.

G. Transformers.

Inspection and normal tests revealed no damage in every transformer. All transformers are located well away from the heat of the blast.

H. Standby Generating Batteries.

This item does not apply to the vessel.

I. Portable Batteries.

No portable battery was damaged in any way. No battery case any indication of battery damage. The emergency Diesel generator functioned properly on return of the ship's force (approximately one hour).

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K. Motors, Motor Generators Sets and Locomotive Diesels.

No damage was found to any motors, generators or locomotives. All units were operating and running satisfactorily.

L. Lighting Equipment.

1. About seventy (70) standard commercial incandescent lamps were broken throughout the ship. Most of the fixtures were on main deck and above, affording a maximum of illumination to the quarters on the second deck.

2. No lighting fixtures or fixtures were damaged by the blast.

3. A Crouse-Elliott ECO 51, Type ACB-14 Gen No. 427452, cargo flood light and front glass, both port and starboard, and one point of the three point mounting bracket. The glass was broadside to the blast.

M. Searchlights.

1. Two (2) 24" searchlights above the signal bridge, port and starboard on the forward stack, were undamaged. These lights were of the latest welded steel construction.
2. Two (2) 12" searchlights were mounted on the wings of the signal bridge. Both lights were well exposed to the blast. The starboard light had the lamp broken. The port light was mounted on the hand rail which collapsed, allowing the light to fall against the adjacent blast gauge tower. The reflector, front door glass, lamp and lamp base were broken, and a handle handle jammed so as to be inoperable. The damage is not a result of design but of mounting.

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S.		Telephones.	No damage was found on the telephone system.
S.		Indicating Systems.	No damage was found on the indicating systems.
S.		Indications Systems.	Only one (1) indicating system was damaged. The "Edwards" fire alarm annunciation, Dmg. 8827. This is a 12 zone indicator lights projecting through holes in the distilling C. S. jury-rigged metal panel, fastened to the panel from showing during darkened ship hours. This caused the 2 part of the original design. It was noted that the holes in the panel itself were small and that any misalignment of knobs would result in contact with the panel and danger from breakage due to vibration or shock. The panel was mounted on the forward port wheelhouse bulkhead.
U.		I.C. and A.C. O. Switchboards.	The combined I.C. and A.C.O. switchboard was inspected. No damage was found and the board operated satisfactorily.
V.		F.C. Switchboards.	This item does not apply to the vessel.

2. The following damage was found on the F.C. switchboards:

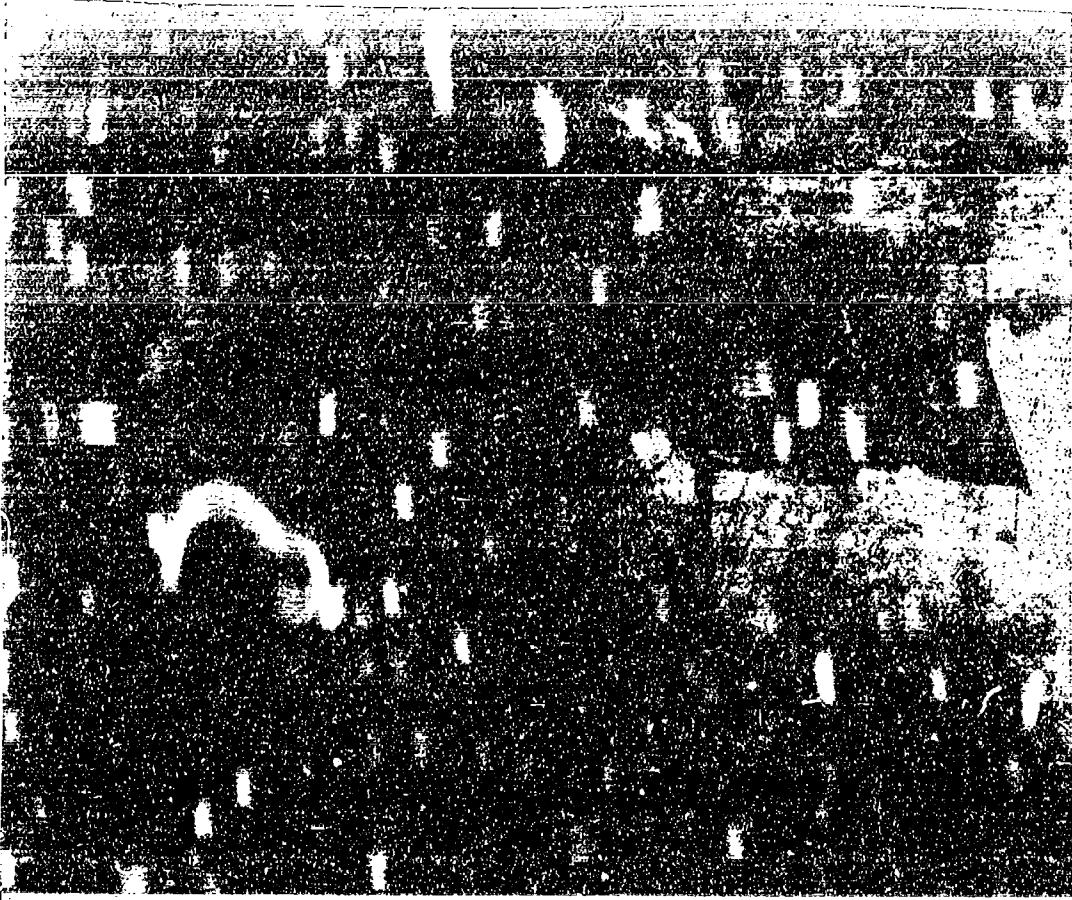
2.1. The F.C. switchboard was damaged on the 22nd of April and the 4-1000 volt meter was found to be shorted. The meter - 1000 volt meter was found to be shorted from the 22nd of April to the 23rd of April. The meter was repaired and returned to the technical department on the 23rd of April.

2.2. The F.C. switchboard was damaged on the 22nd of April and the 4-1000 volt meter was found to be shorted. The meter - 1000 volt meter was found to be shorted from the 22nd of April to the 23rd of April. The meter was repaired and returned to the technical department on the 23rd of April.

SECTION 2

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SECTION IV

PHOTOGRAPHS

TEST AREA

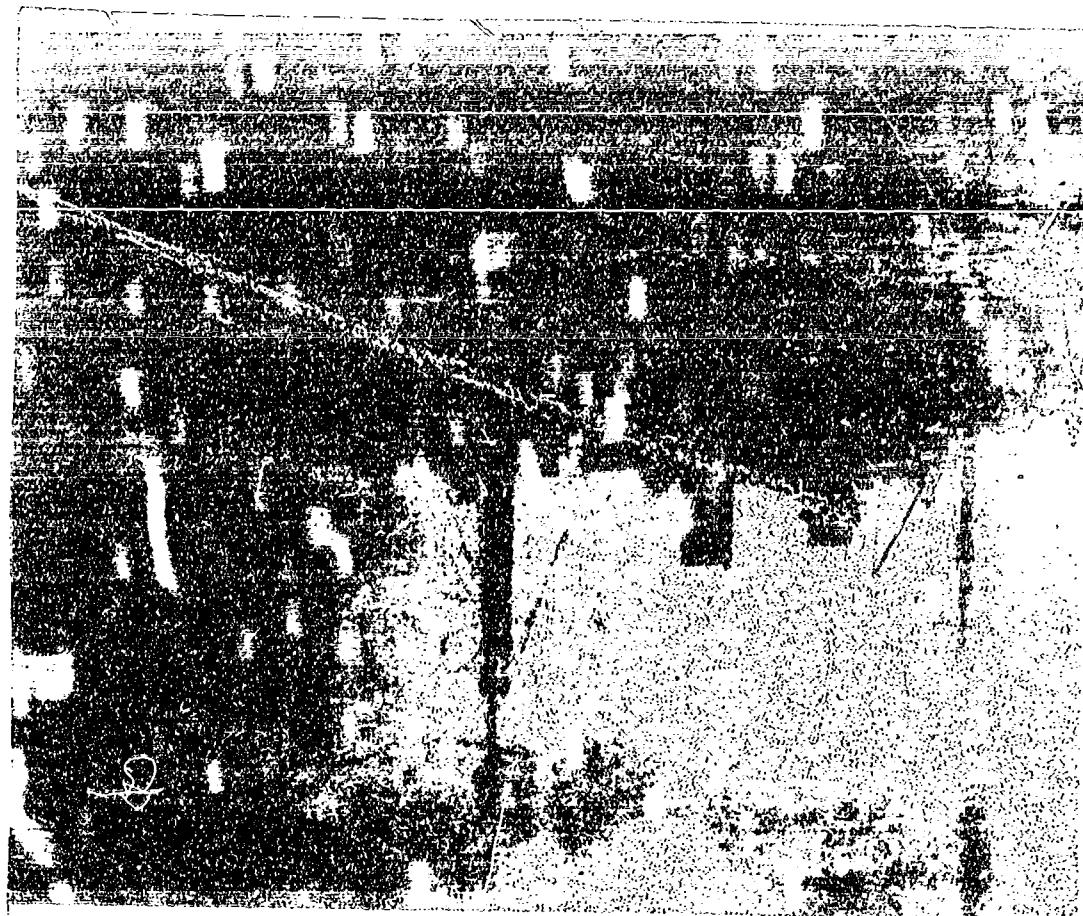
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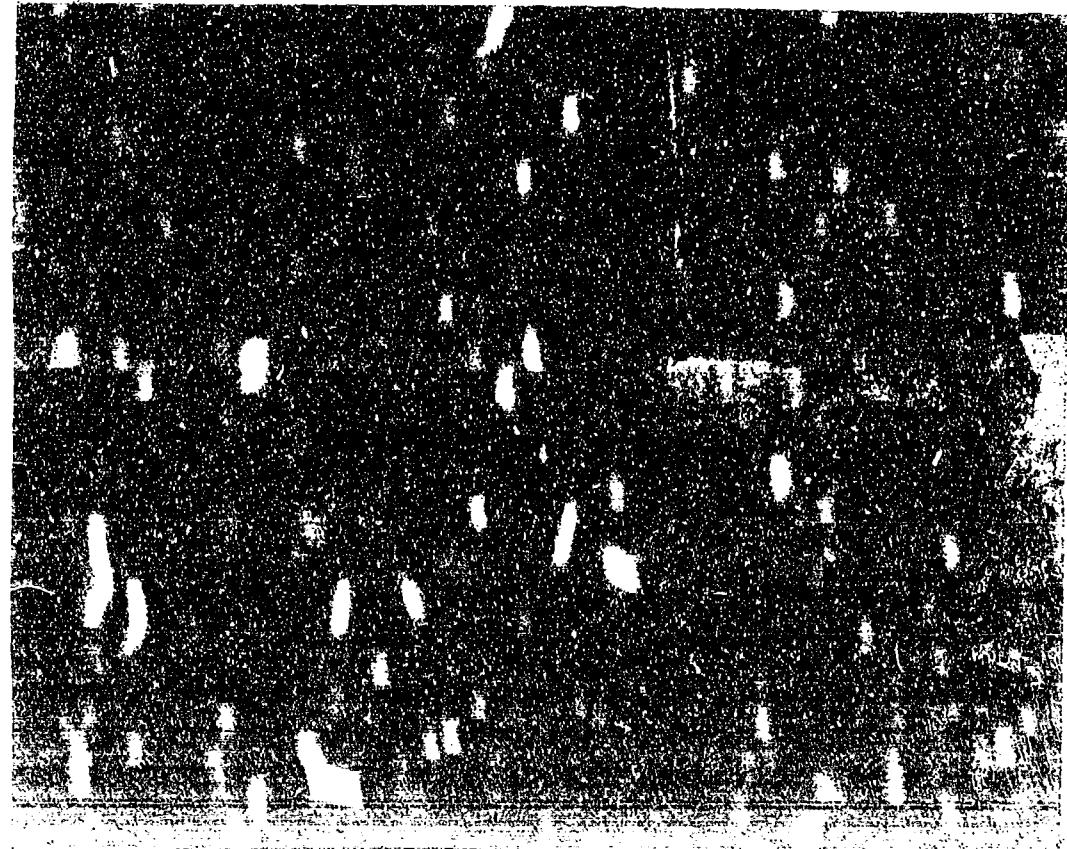
EA-CR-196-158-36. View from off port bow before Test A.

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BA-CCR-196-159-34. View from off port quarter before Test A.



BA-CCR-237-37-34: View 21cm off port beam after Test A.

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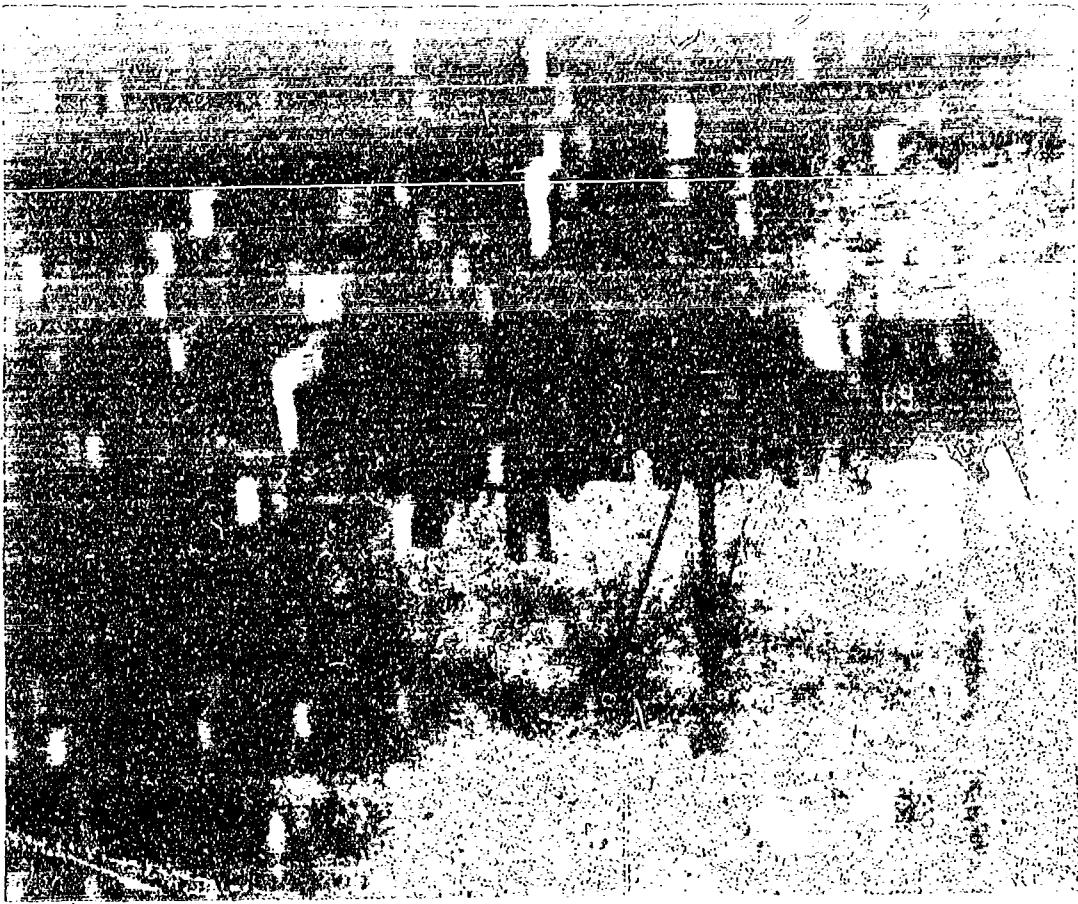
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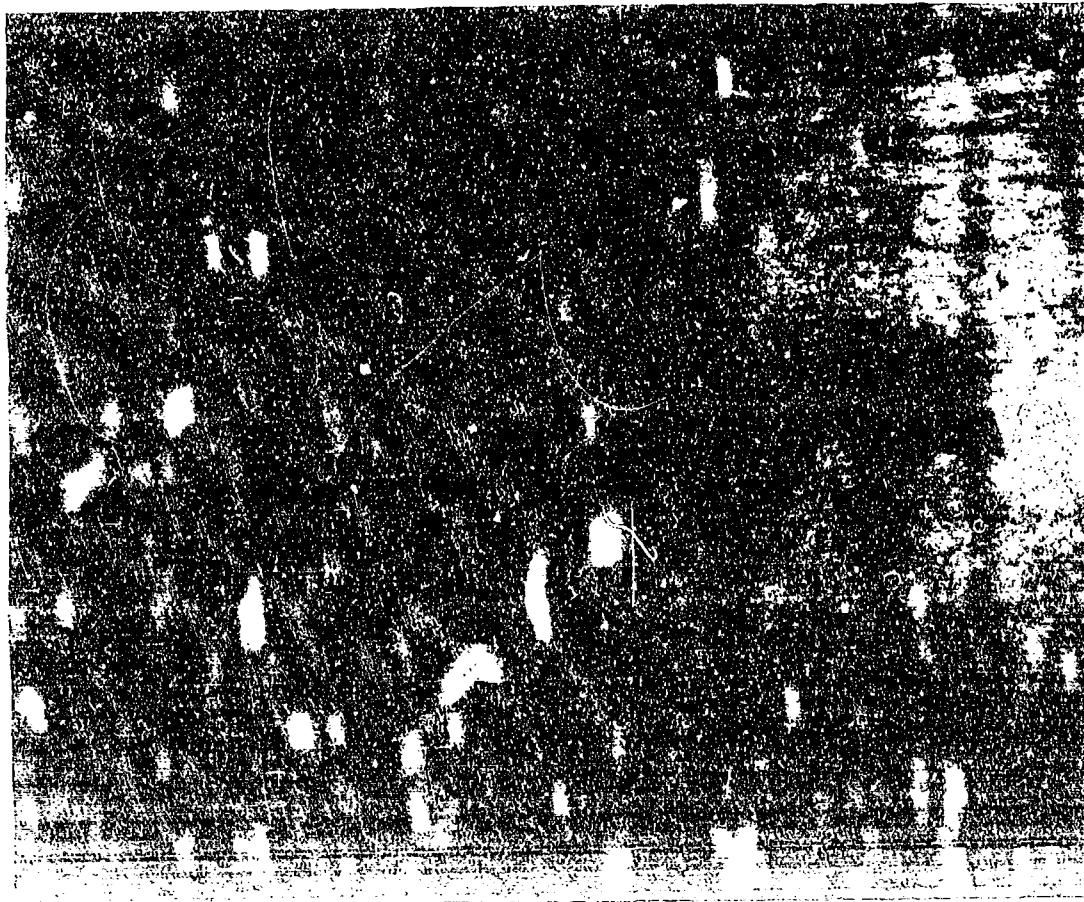
BA-CR-196-158-40. View from off starboard quarter before Test A.

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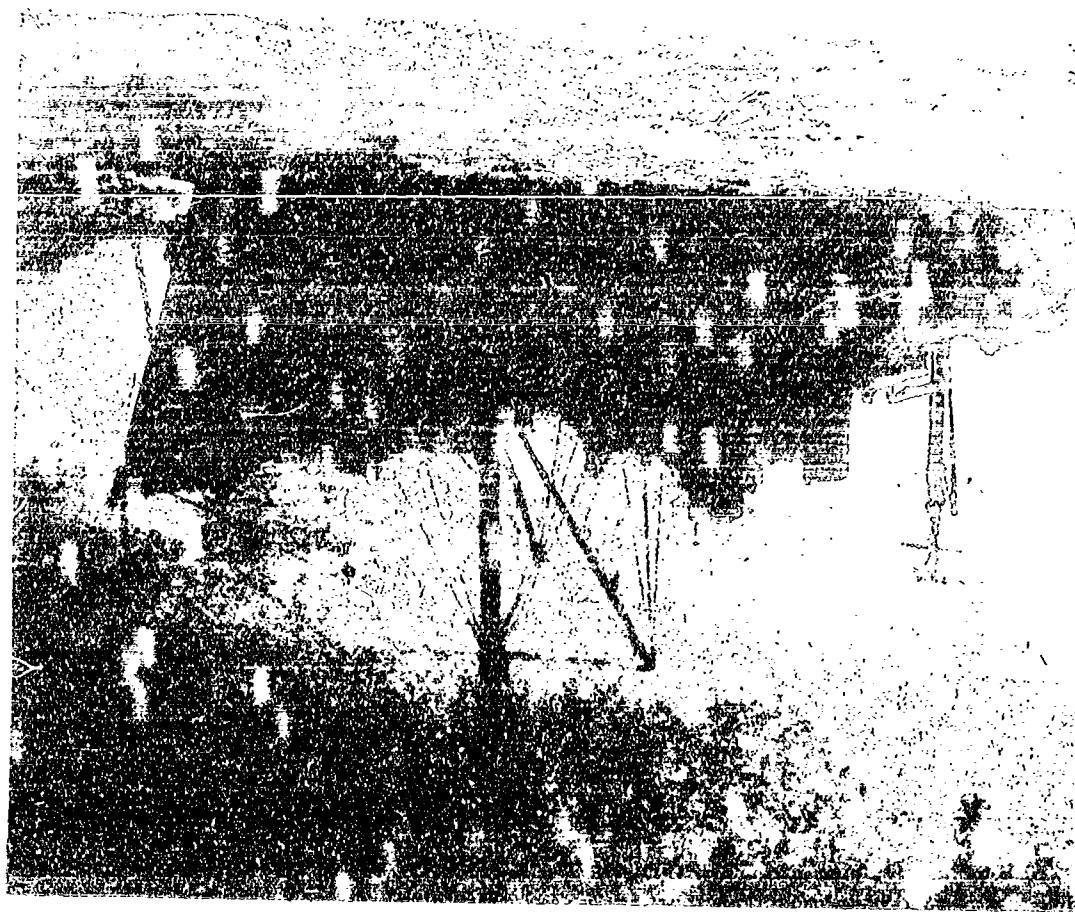
VA-CR-227-87-37. View from off port quarter after Test A.

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BA-CR-196-159-38. View from off starboard bow before Test A.



BA-CR-227-CF-21. View from off starboard bow after Test A.

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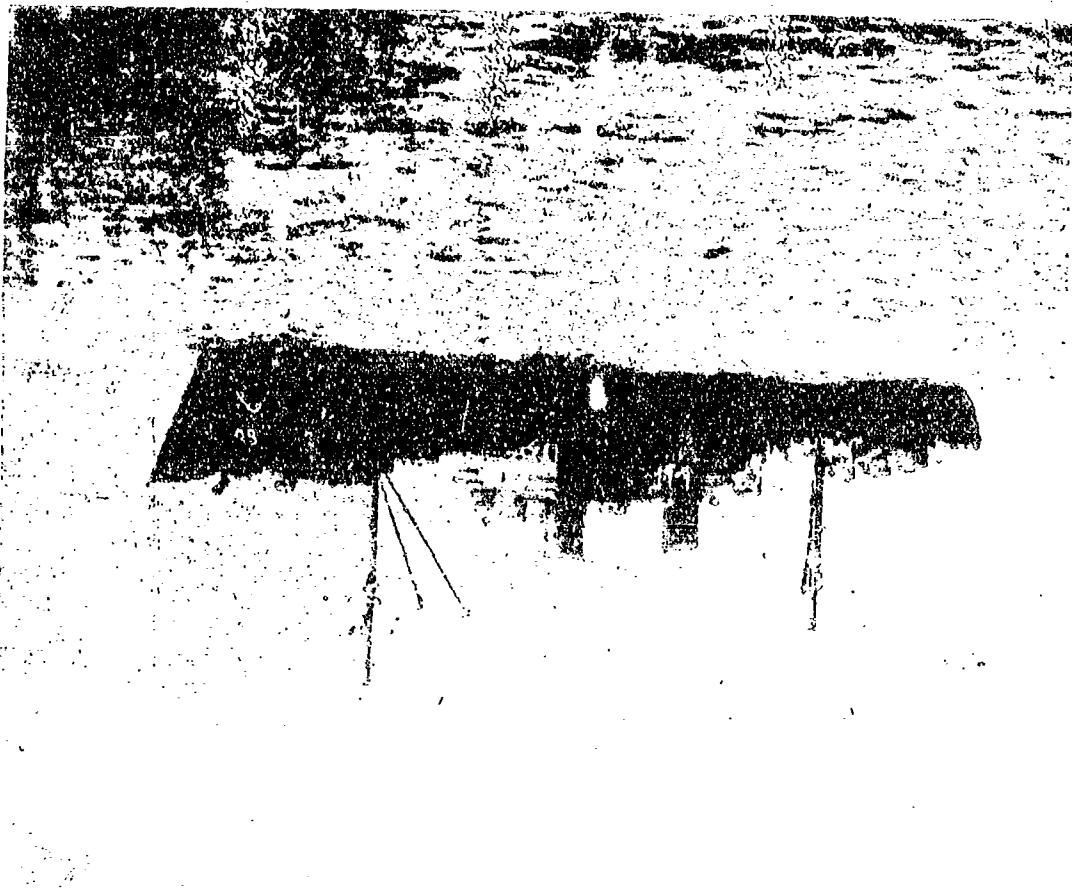
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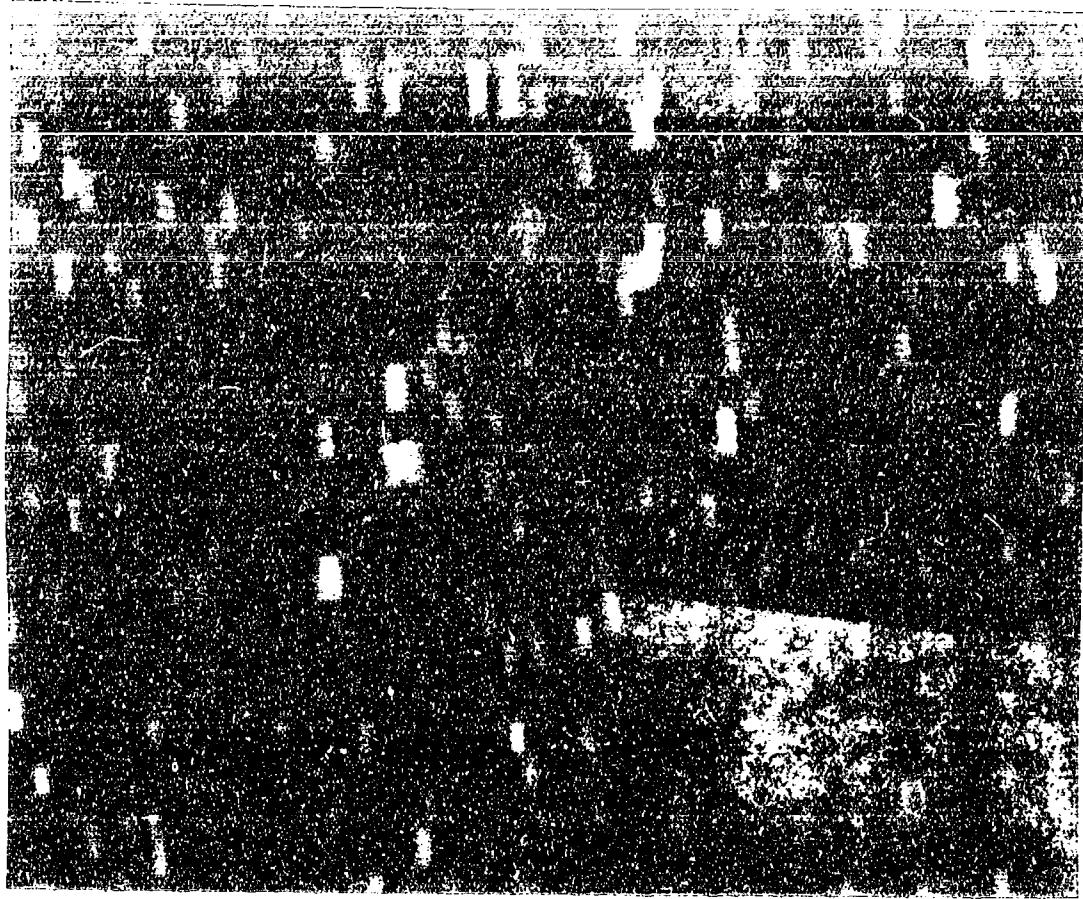
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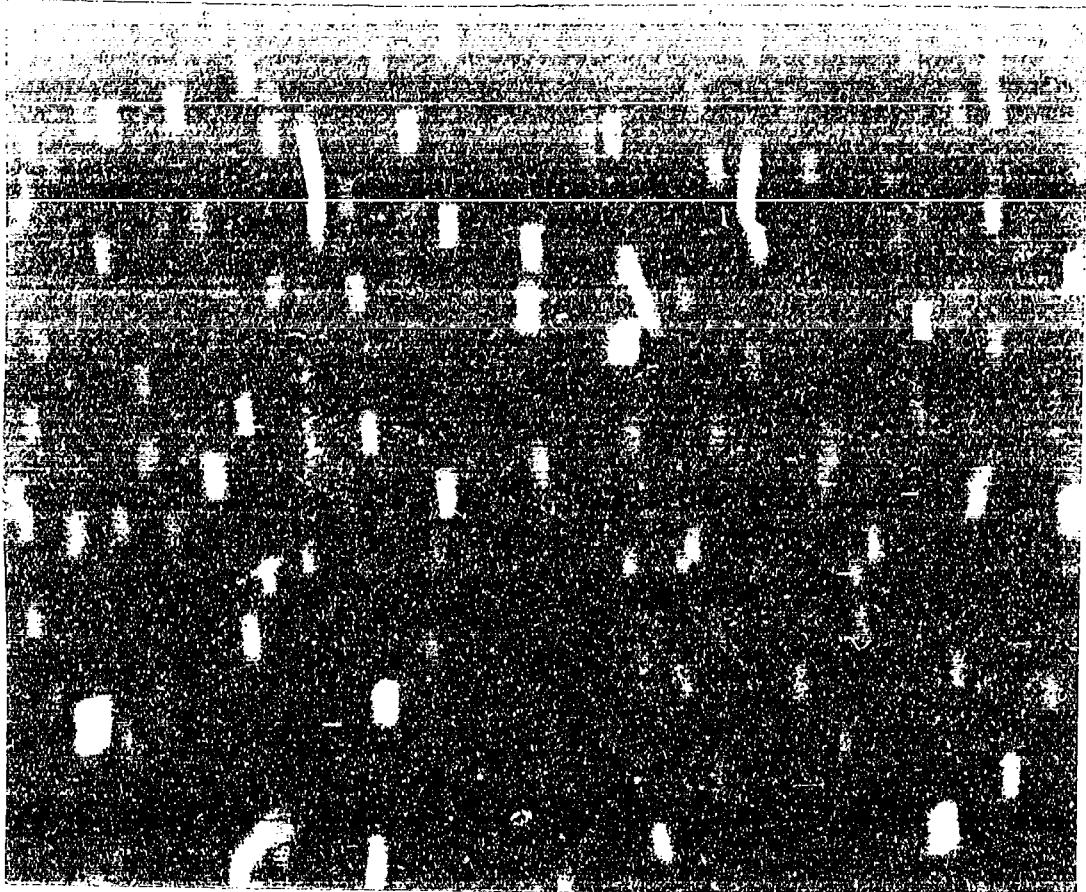
AA-CR-227-37-36. View from off starboard bow after Test A.

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AA-CR-65-1733-5. Starboard side of after stack showing blast damage.

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AA-CR-65-1733-1. Damage caused by fire in starboard flag barge.

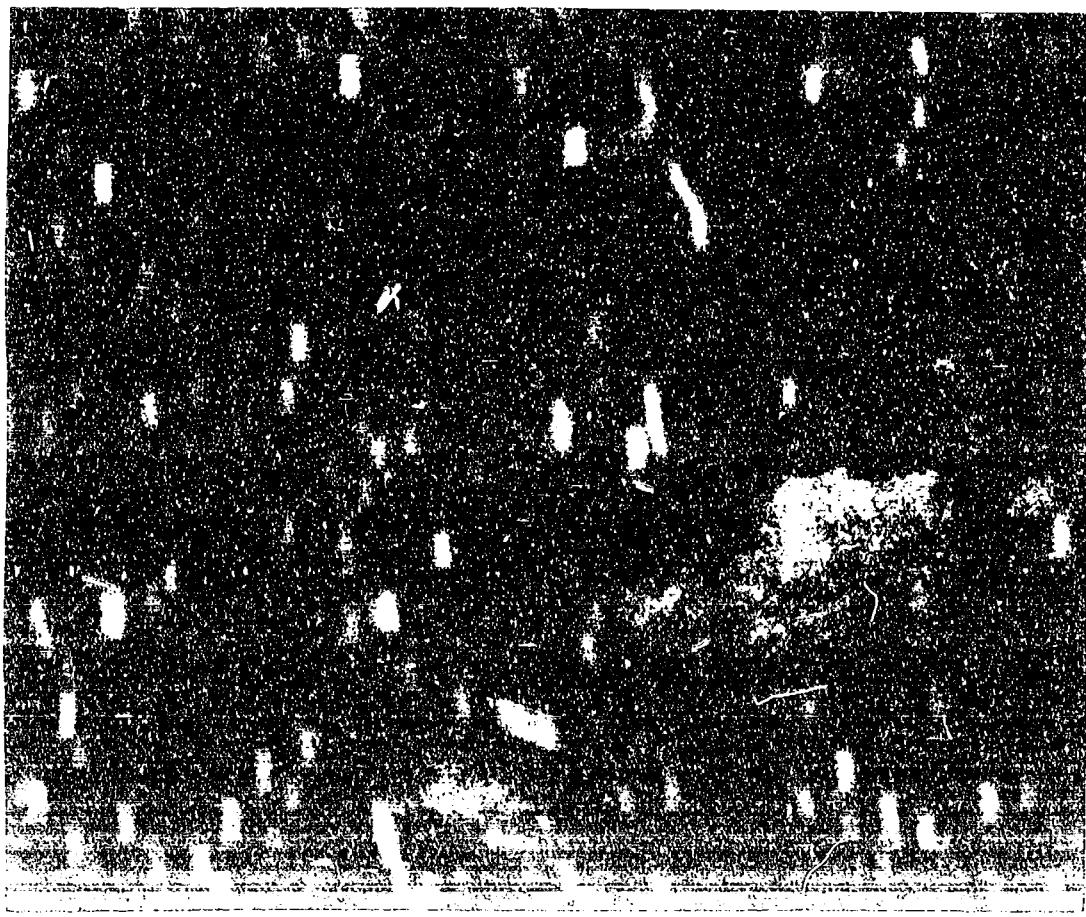
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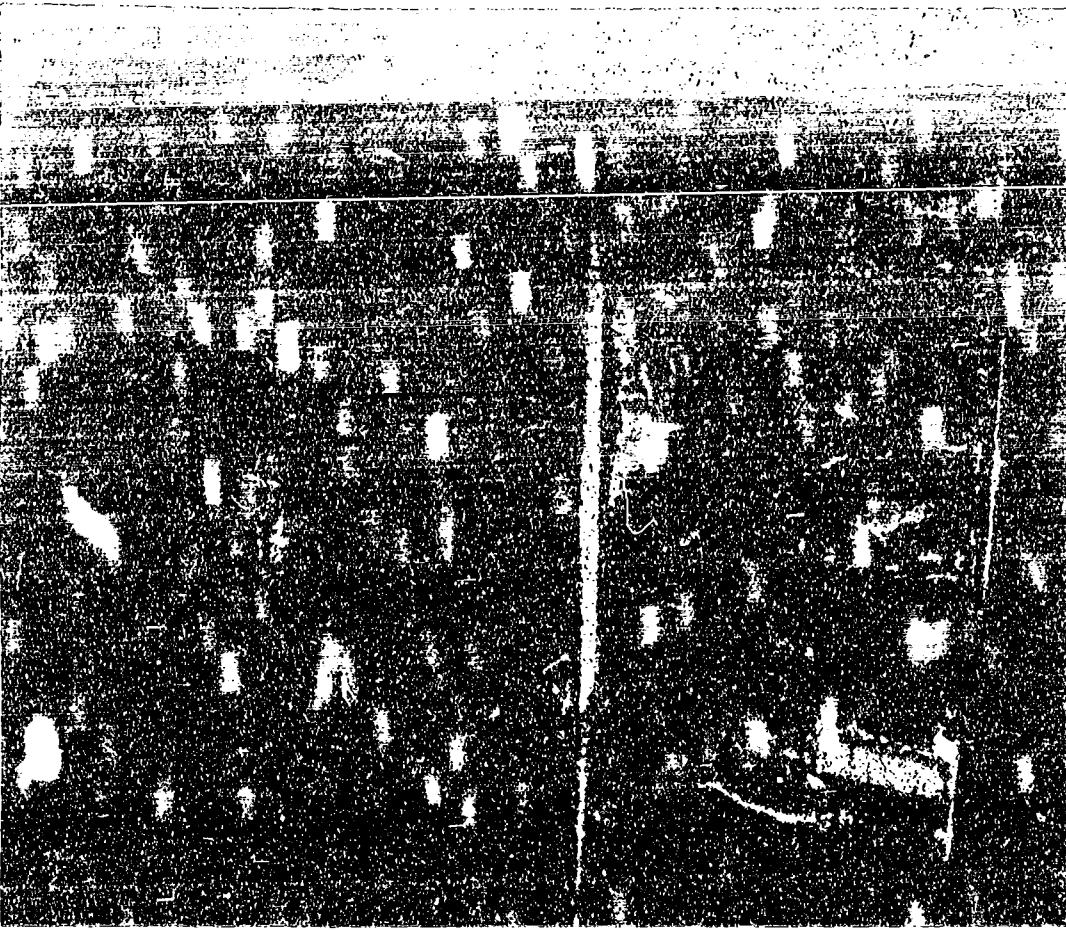


AA-CR-65-1733-4. Damage to signal shack on signal bridge.

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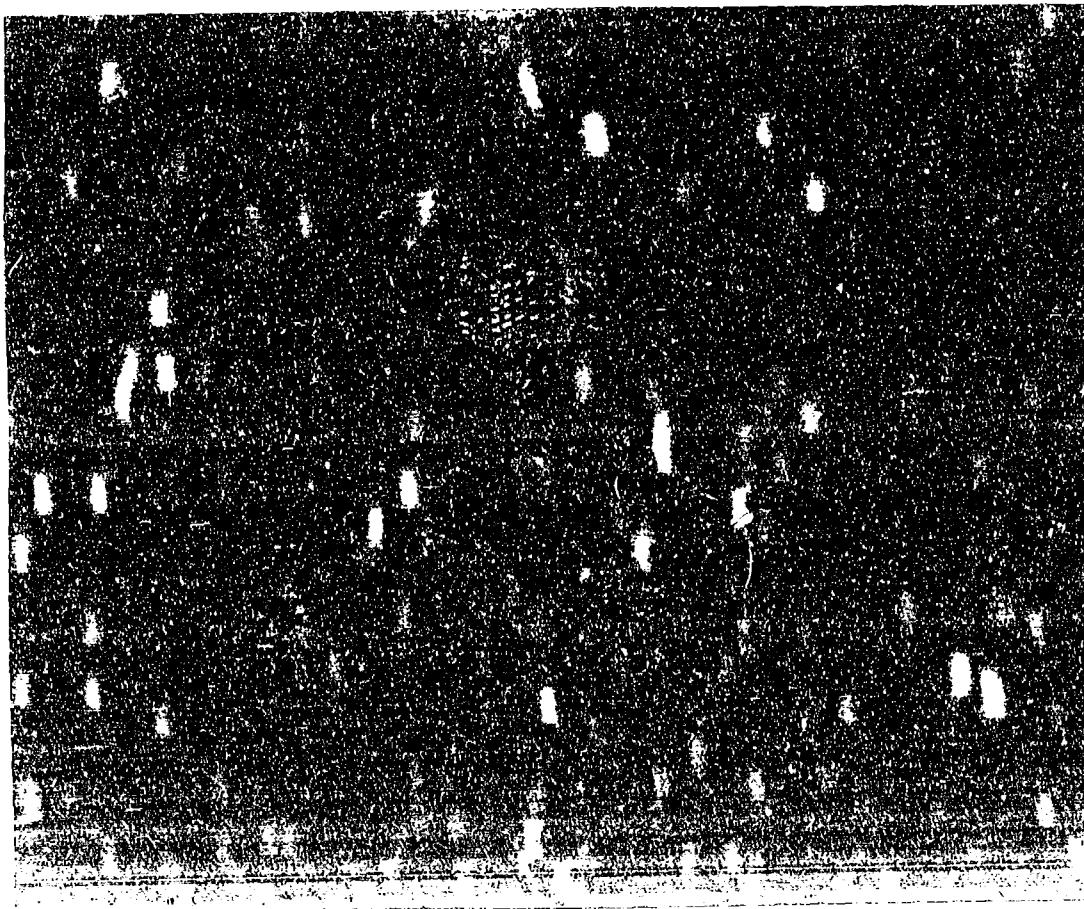
AA-CR-82-1830-1. Holes and dents in pontoons of after cargo hold.

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USS BANNER (APA 60)

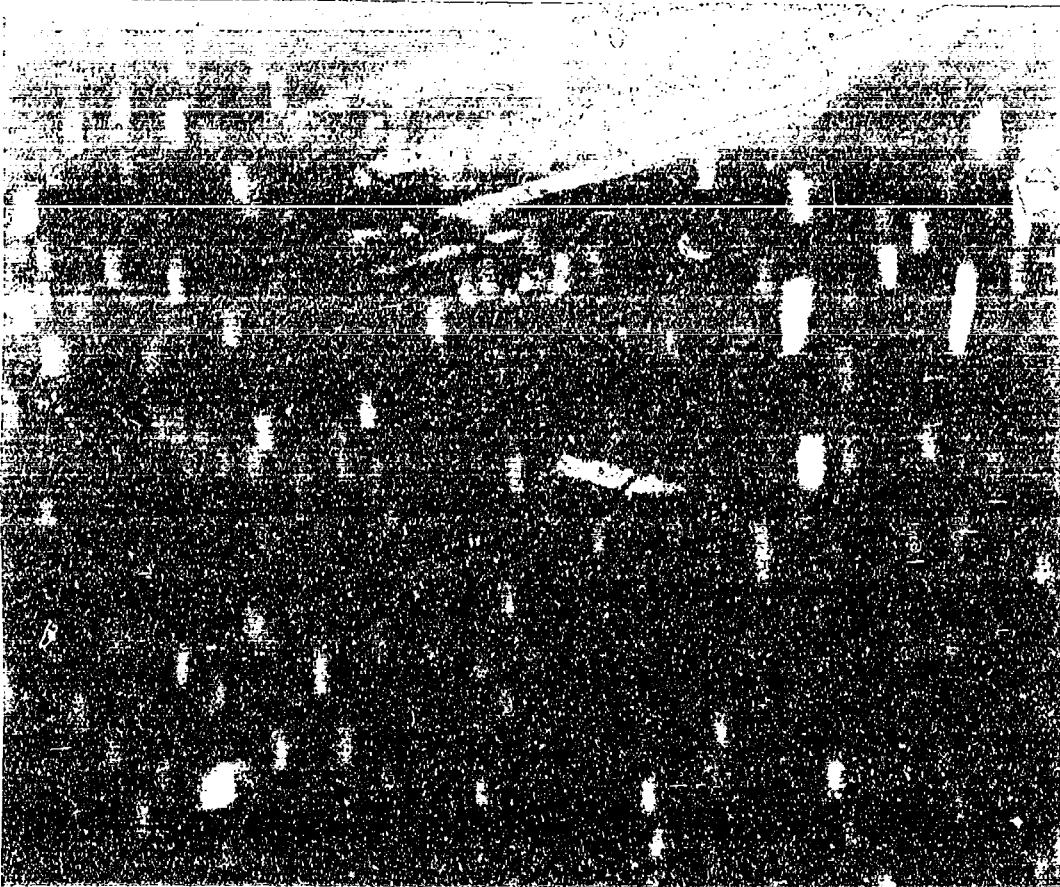


AA-CR-82-1829-11. Holes in pontoons of forward cargo hold.

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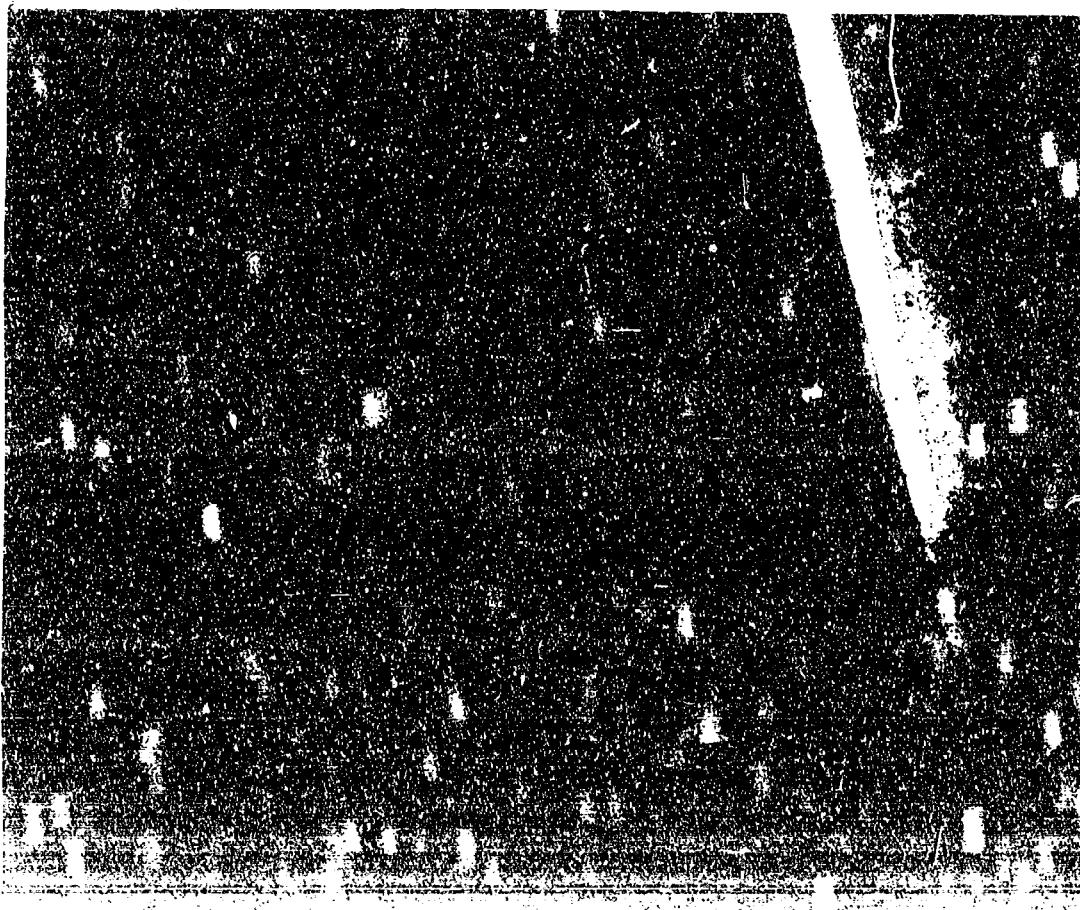
AA-CR-79-1814-11. Wreckage on main deck ir forward hold.

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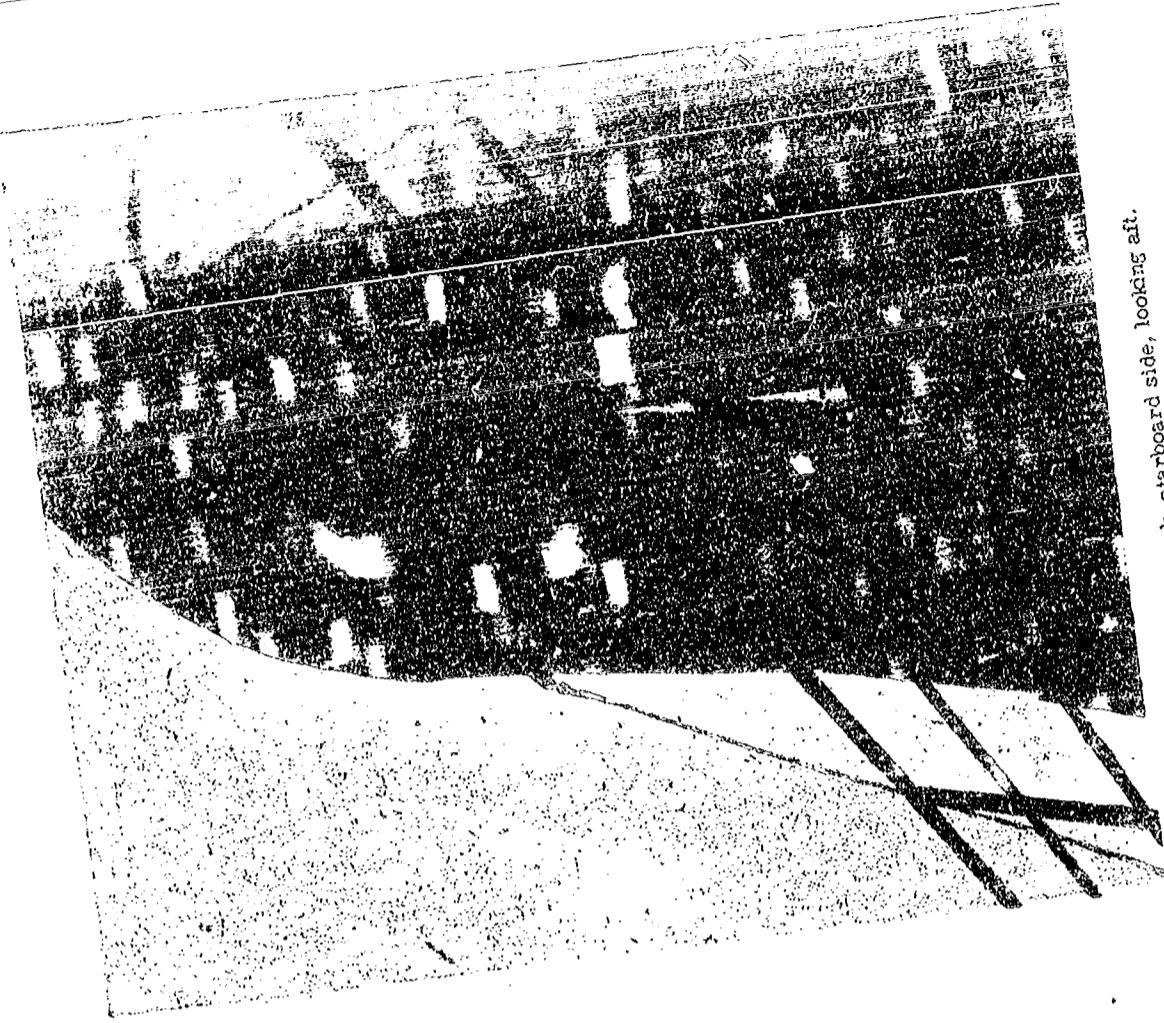
AA-CR-79-1814-10. Damage to hatches in forward hold on main deck.

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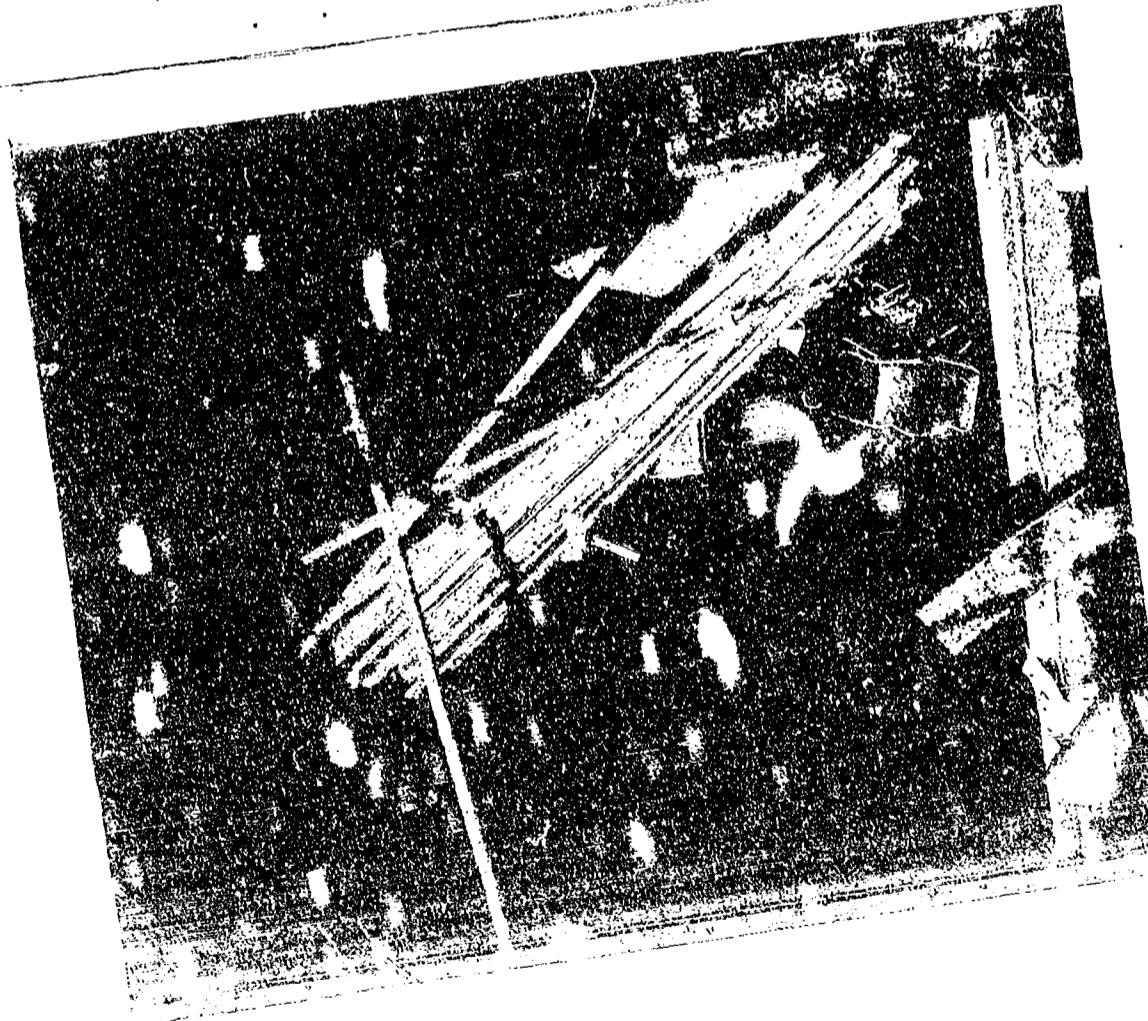
AA-CR-62-2169-7. After stack, starboard side, looking aft.

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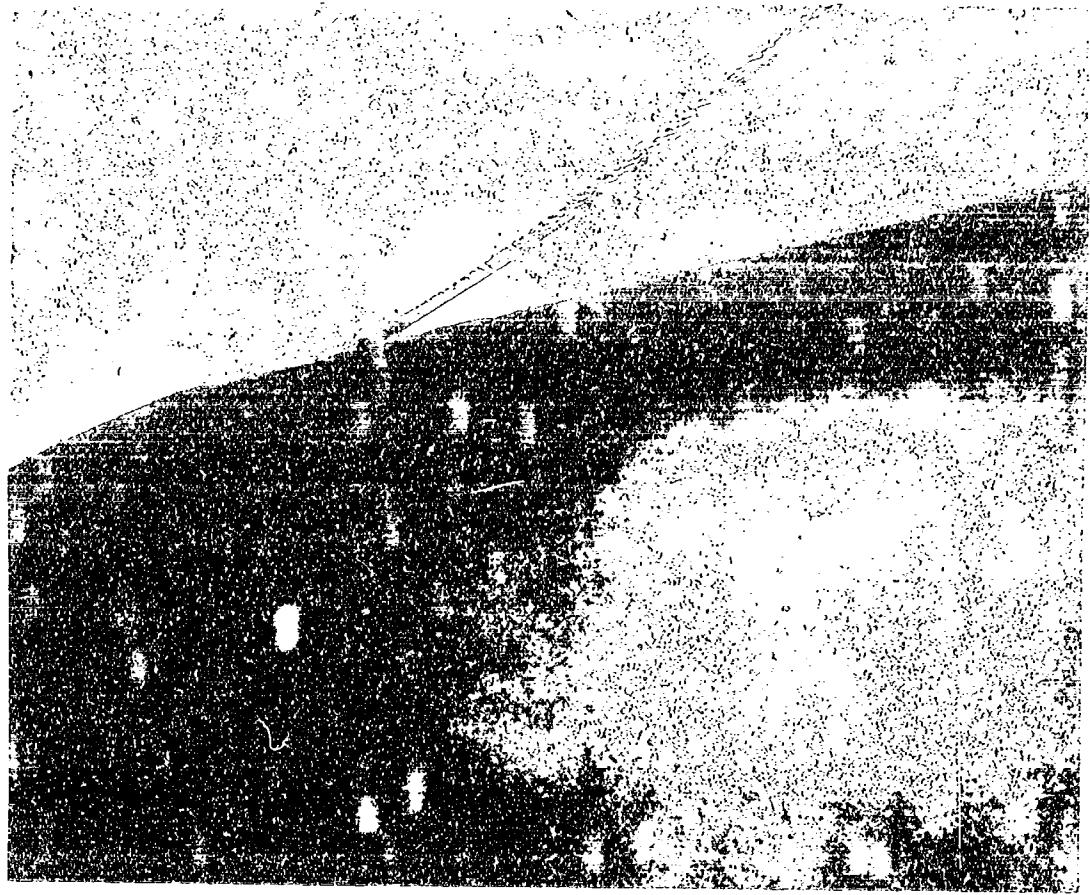
AA-CR-79-1814-8. Debris in after hold.

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AA-CR-62-2169-9. After stack, port side.

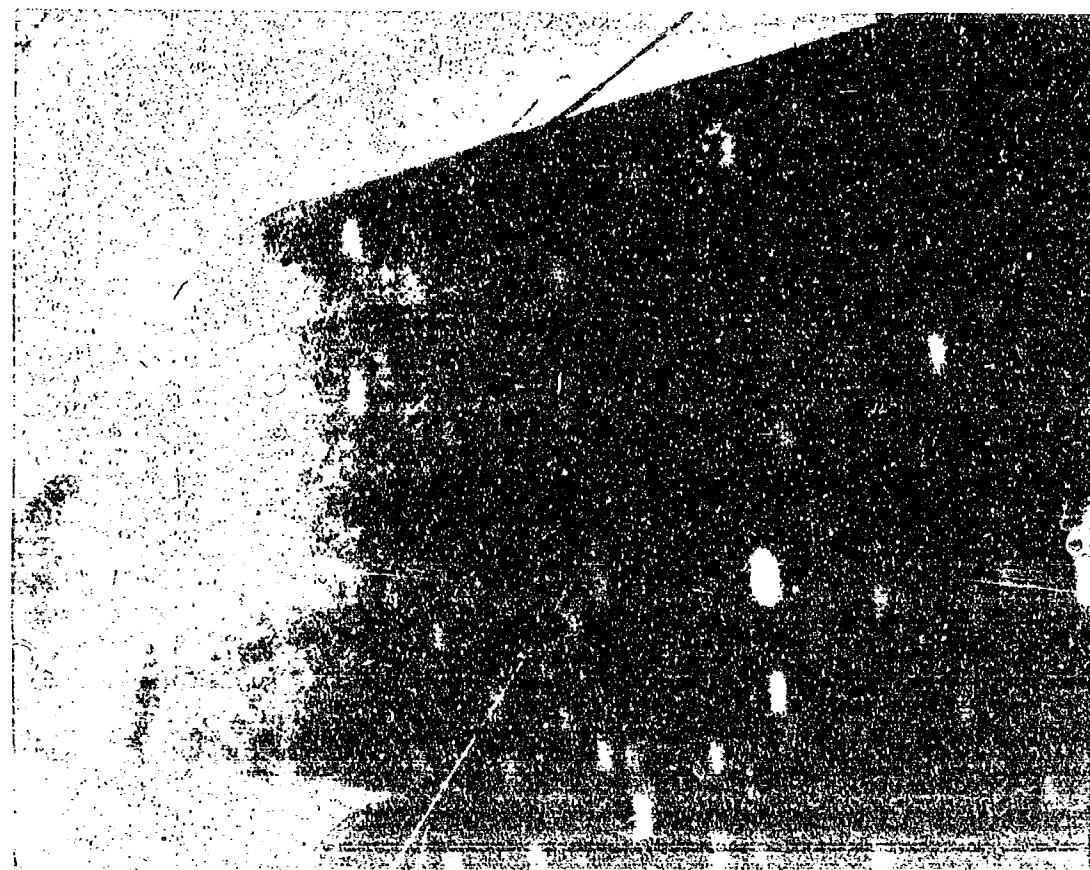
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USS BANNER (APA 60)

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AA-CR-62-2169-8. After stack, starboard side, looking forward.

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USS BANNER (APA 60)

APPENDIX

SHIP MEASUREMENT DATA

TEST ASBL

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USG BANNER (ASA CO)

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PART A - GENERAL STEAMWAN
SECTION I

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SCIENCE SECTION.

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(a) Direct after test - Portion 3 feet 2 inches long 18 feet. List after test 2 degrees SSW. These were the same as the first test.

(b) Damage to superstructure was negligible. Two to three inches of the hatch boards and their surrounding structures covering the entire deck were knocked down into the holds. Some of the hatch covers were picked up the first platform decks in the holds were picked up the deck and cast into the very bottoms of the holds. The stairs were dashed about. The joiner bulkheads in the vicinity of the holds were disturbed. A set of two weather tight and three transverse doors were dashed in. Hatch boards, on the superstructure deck were broken.

(c) There was very little damage to the electrical, electrical, ship control, fire control, gunnery or electronics equipment. The starboard side, the stern, and most tank deck sections exposed to the blast showed evidence of scorching. Only one gun was started - the starboard 1103 deg on the starboard deck. Little damage. It is estimated that all personnel to survive in the engine room and in the berthing compartments in the vicinity of the blast would have been killed or made ineffective by the effects of the increase in pressure on blood.

Forces Evidence and Torts 205

(2) The heat from the blast struck the ship from an angle bearing of about 150 degrees. The entire starboard side and parts of the ship facing ast were scorched slightly, just enough to penetrate the first layer of paint. There was some evidence of heat on the main deck lines in the most exposed parts of the ship and about 100 yards. The effects did not penetrate the hull nor burn through the sides. There was nothing unusual in the behavior of steamship or environment.

EPILOGUE

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58 on the superstructure deck were bent by the blast and several were on strengthening frames cracked.

(e) The after starboard part of the deck and the exposed parts of the superstructure and masts were coated with a thin, dry, black, greasy soot. An aluminum coffee pot about eighteen inches high and rather unstable was found still erect on a bench located about one-half feet from the place on deck and the after hold end about five feet from a weather tight door that was dashed in.

The direction of the shock is presumed to have come from 180° N.E. The only evidence noted was the opening of incubator doors and cage entrances in the vicinity of the birds. This effect was noted in 20% of the birds beaten more than by shock. About 10% of the birds were beaten in the same mostly in the torso, com- bined with the head and neck. The remaining 70% of the birds were unaffected. The shock effect was much less than in a situation where moderate shock damage.

11. The remains were left on ship from about 1600-1700 hours. During these we sighted evidence of a current from a reverse to a regular. This set delayed us. We had to stand and 19° to port. The ship's side and deck were twisted, twisted and twisted. The light steel metal structures outside were bent and all the wooden frames in the centers of the ship parts were dislodged. All the life-rafts were broken and twisted. The wooden oil and glycerin of the "Cyclops" may were found on the deck. The wooden masts were shattered. The weather tight and watertight doors to public areas and the decks were dashed slightly. The greatest damage was done to the engine and their immediate vicinity. The water tanks, "A" and "B" tanks, containing the loads were ruptured. They were sealed as much as 30% and knocked onto the deck platform deck with such force that they tore several holes about 10 inches in diameter in these joints. The large 1000 pound pompons on the deck and second deckhouse decks were lifted to and dropped onto the bottom of the holds. The large 5000 pound type strongbacks supporting the steel beams forming the cover of the hold were sheered in on the side and knocked into the bottom of the holds. Lower decks collapsed and structures in the bottom of the holds were torn down.

CEB BANNER (APASS)

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(c) Three waterlight doors were closed in and ineffective.

(d) All personnel in exposed parts of the ship, in the after engine room and in the vicinity of the holds would have been killed or incapacitated for duty. Men in the watch room, engine room, closed bridge, troop berthing spaces and forward engine room would probably have survived the blast. The pressure wave knocked out the thin joiner bulkhead separating the after hold from the entrance to the after engine room on the starboard side and entered that space. Only evidence of the effect of the blast in the engine room was the shattering of glass and liquid pressure measuring instrument suspended in that space. It is assumed that the blast would have killed or killed the personnel in the after engine room. The gallery was filled with soot but readily cleaned. The banks located adjacent to the holds were unusable. My conclusion is that the habitability of the ship was only slightly affected.

(2) The fighting efficiency of the ship would have been reduced only in proportion to the number of men rendered ineffective by the blast. Since all men topside would have had to have been replaced by less experienced personnel it is felt that the fighting efficiency of the ship would have been greatly reduced though the equipment was in no way damaged.

General Summary of the

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USS BANTER (APD-60)

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This ship is an armed transport with a primary mission of carrying troops and landing them at a designated spot. If the boats she carries were to encounter severe weather conditions of the ship's cargo would be lost and loss of after engine room force and personnel. The safety of the boats could have been avoided with improved construction of hatch covers over the holds and heavier metal protecting the engine rooms. Concern for the loss of personnel, increased, the boats, severely splitting, had little effect on the effectiveness of this ship.

Emergency Recommendations.

The damage to the ship was extensive. Frame structures were exposed to similar losses in that they made of heavier metal and protected in the same way. The hatch boards connecting the holds of the ship are thin and weak. They should be made much larger and stronger and completely covered in place rather than just recessed in their present position. The large 1000 lb. door joints forming the first deckhouse entrance should be heavy and strong. Hatch covers should be firmly anchored in place. The heavy 2500 lb. door can be held up and dropped. Living spaces adjoining the holds should be screened from the holds by heavy bulkheads and effects of heat and fire. Care must be exercised spaces should be closed off in heavy doors. The hatches should be closed off in the rear of the ship by heavy watertight doors.

SECTION I PART C - INSPECTION REPORT

SECTION A - HULL

A. General Description of Hull Damage.

- (a) Excellent.
- (b) No hull damage.
- (c) No comment.
- (d) None.

(e) Conditions as they were before the blast.

B. Superstructure (exclusive of gun mounts).

- (a) No damage to bridge area. Estuaries or signal bridge were burned and broken. Starboard fire hose burned out and signal bridge's open deck house made of sheet metal badly bent but still useable. The two stacks were distorted in slightly but nothing inside was damaged. Light metal structures bent and distorted.

- (b) In all cases damage was caused by blast or pressure wave except in the case of the fire in the 2nd deck. This appears to have been caused by falling balyards that were burning.

- (c) None except for starboard flag bag on signal bridge and the beach master set next to it and probably some signal balyards.

- (d) No comment.

- (e) The use of light sheet metal anywhere in the superstructure should be discontinued for any blast will bend or rupture it making it unusable as well as a personnel hazard.

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operated by the pressure wave and the raft released. NO COMPLAIN.

C. Rafters, Cross and Diagonals.

- (a) Excellent, entirely observable. No comment.
- (b) No comment.
- (c) Generators lash shifted distorted so as to prevent direct stereoscopic rangefinder. Excellent.
- (d) No comment.

D. Torpedo Mounts, Depth Charge Gear.

- (a) None installed.
- (b) None installed.

E. Weather Decks.

- (a) The deck was intact. The only damage was to the covering over the two cargo holds. The tops of both holds were crushed in. The hatch boards 1" x 3" x 7' covering the holds were bent downward (some were folded as much as 90°) and twisted into the first platform deck with such force that they tore several holes about 3" x 6" in fifteen pound plate. The large 1000 pound portcouns forming the first and second platform decks were lifted up and dropped down into the bottom of the holds. The large 6" beam type stringbacks supporting the hatch boards forming a cover of the holds were sheered off on one side and knocked into the bottom of the holds. The holds were also covered by three layers of canvas battered down. The holds were empty except for an aircraft in the bottom of No. 2 hold.
- (b) The covers for the holds could not be repaired, but the large portcouns had made up the platform decks could be lifted back into place.

- (c) No comment. The wooden frames forming the center of the life rafts were jarred a little out of place but did not impair the effectiveness of the rafts. The sheet metal guides for tiers of rafts were bent over the rafts and might interfere with their release. This could not be checked as this vessel carried only one raft in each tier. The pressure release on the raft starboard side at frame 88 was

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USS BANNER (AP-60)

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operated by the pressure wave and the raft released. NO COMPLAIN.

F. Exterior Hull Above Waterline.

- (a) Only scorched along starboard side by blast.
- (b) No damage.
- (c) No damage.
- (d) None installed.
- (e) Only damage was in vicinity of holds. The blast hit the bulkheads of the holds outward slightly.

- (f) Joiner bulkheads in the immediate vicinity of the holds were bent or damaged in varying amounts depending on size, proximity to the holds. The bulkheads of offices, made of light metal, which formed a passageway with the heavy bulkhead of the holds were bulged outward slightly, that is, bulged toward the hold.
- (g) One watertight door in the vicinity of the holds and no longer effective. Two weathertight doors in the superstructure were blown several feet down the passageways. These doors were all pulled out away from the compartments they closed as if sucked along by the blast. These doors were in good condition generally. Only the screws holding their hinges were pulled out or sheered off. Some doors in the same area were unaffected.

- (h) In the holds, the living spaces adjoining actual holds were unprotected by any bulkheads. Here bulk frames were scattered about and their supporting stanchions bent. Lockers in this area were crushed or blown apart. In the other compartments protected by doors, only the doors or bulkheads were damaged. Rarely was any damage caused inside the compartments. The blast just nipped the doors off, or bulged the bulkheads slightly.
- (i) None.

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15. Only one damage jam of its importance was found. The ship was listed and found to be safe and free of structural damage. Damage to hull, water tight doors, increased its water tight integrity. All damage to hull structures could be quickly repaired.

16. Arrest deck. Not found.

No damage.

Interior compartments below waterline.

(a) No damage.

(b) No damage.

(c) No damage.

17. Superstructure damage.

(a) None.

(b) None.

(c) None.

18. Conditions normal.

(a) None.

(b) None.

(c) None.

19. Conditions normal.

(a) None.

(b) None.

(c) None.

20. Conditions normal.

(a) None.

(b) None.

(c) None.

21. Conditions normal.

(a) None.

(b) None.

(c) None.

22. Conditions normal.

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(c) None.

(d) None.

(e) None.

(f) None.

(g) None.

(h) None.

(i) None.

(j) None.

(k) None.

(l) None.

(m) None.

(n) None.

(o) None.

(p) None.

(q) None.

(r) None.

(s) None.

(t) None.

(u) None.

(v) None.

(w) None.

(x) None.

(y) None.

(z) None.

(aa) None.

(bb) None.

(cc) None.

(dd) None.

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Administration Section.

(2) Laundry services automatic lockers located throughout ship in accordance with agreed design. No damage to any automatic laundry service locker. All the way down the upper deck, but its door closed in slightly. Exterior of lockers were scorched due to existence of heat zone index.

(3) Magazine located below deck in accordance with agreed design are undamaged.

(a) No comment.

(b) No comment.

Armament Section.

(a) Conditions normal.

(b) None.

(c) None.

(d) None.

(e) None.

(f) None.

(g) None.

(h) None.

(i) None.

(j) None.

(k) None.

(l) None.

(m) None.

(n) None.

(o) None.

(p) None.

(q) None.

(r) None.

(s) None.

(t) None.

(u) None.

SECTION I

PART C - INSPECTOR INSPECTION

SECTION 3 - MACHINERY

A. General Description of Machinery Damage.

A.	General Description of Machinery Damage.
B.	None.
C.	Boilers.
D.	Blowers.
E.	Fuel Oil Equipment.
F.	No comment.
G.	No comment.
H.	No comment.

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SECTION C - INSPECTION REPORT
SECTION C - ELECTRICAL

6. Inspected Apparatus of Electrical Damage.

6a. General Components.

All the electrical equipment was in excellent condition excepting an effect of the heat was observed. No comment.

6b. Electric Propulsion Rotating Equipment.

6c. Electric Propulsion Control Equipment.

6d. Generators - Ships Service.

6e. Generators - Emergency.

6f. Generators - Distribution and Transfer Panels.

6g. Transformers.

6h. Wires, Wiring Equipment and Wiresways.

6i. No comment.

6j. No comment.

6k. No comment.

6l. No comment.

6m. No comment.

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No comment.

Submarine Recognition Batteries

Not installed.

Portable Batteries.

No comment.

2. MOTORS, Motor Generator Sets, and Controllers.

No comment.

3. Lighting Equipment.

(a) - (e) No comment.

(f) About 70 light bulbs statemented still in use.

4. Compartments.

No comment.

5. Searchlights.

No comment. One port 12" light fixture and one starboard 12" light fixture and one port 12" light fixture and one starboard 12" light fixture.

6. Degaussing Equipment.

No comment.

7. Gyro Compass Equipment.

No comment.

8. Sound Powered Telephones.

No comment.

9. Ship's Service Telephones.

Not installed.

10. Announcing System.

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SECTION I
PART C - INSPECTION REPORT

SECTION D - ELECTRONICS

A. General Description of Electronics Damage.

(a) Excellent.

(b) None.

(c) No comment.

(d) 1. Excellent.
2. Insulators on four antennas damaged.
3. None installed.
4. None installed.
5. No comment.

B. Fire Control Radar.

No comment.

C. Surface Search Radar.

No comment.

D. Air Search Radar.

No comment.

E. Radar Repeaters.

No comment.

F. Radar Counter Measures Equipment.

No comment.

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CAUTION

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ATOMIC WEAPONS INFORMATION

NOTICE

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Defense Special Weapons Agency
6801 Telegraph Road
Alexandria, Virginia 22310-3398

TRC

9 April 1997

MEMORANDUM FOR DEFENSE TECHNICAL INFORMATION CENTER
ATTENTION: OMI/Mr. William Bush

SUBJECT: Declassification of Reports

The Defense Special Weapons Agency (formerly Defense Nuclear Agency) Security Office has reviewed and declassified the following reports:

+ ST-H

AD-366748 -	XRD-65
AD-366747 -	XRD-64
AD-366746 -	XRD-63
AD-376826 -	XRD-60
AD-376824 -	XRD-58
AD-376825 -	XRD-59
AD-376823 -	XRD-57
AD-376822 -	XRD-56
AD-376821 -	XRD-55
AD-366743 -	XRD-54
AD-376820 -	XRD-53
AD-366742 -	XRD-52
AD-366741 -	XRD-51
AD-366740 -	XRD-50-Volume-2
AD-366739 -	XRD-49-Volume-1
AD-366738 -	XRD-48
AD-366737	XRD-47

TRC

9 April 1997

SUBJECT: Declassification of Reports

AD-366736 -	XRD-46
AD-366735 -	XRD-45
AD-366723 -	XRD-37
AD-366721 -	XRD-35
AD-366717 -	XRD-31-Volume-2
AD-366716 -	XRD-30-Volume-1
AD-366751 -	XRD-68-Volume-2
AD-366750 -	XRD-67-Volume-1
AD-366752 -	XRD-69
AD-366744 -	XRD-61.

All of the cited reports are now **approved for public release**. **Distribution statement "A"** now applies.

Ardith Jarrett
ARDITH JARRETT
Chief, Technical Resource Center

*Completed
1 Mar 2000
B.W.*